



Resource Allocation in Heterogeneous Multi-hop Cellular Networks

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Condition: New. Publisher/Verlag: LAP Lambert Academic Publishing | A novel framework to model the problem of downlink resource allocation in conventional cellular systems and multi-hop cellular networks is presented. In conventional cellular CDMA systems, we use the dynamic pricing platform to formulate downlink resource allocation based on a novel defined cross-layer utility function. This utility function quantifies the degree of utilization of resources. Unlike the previous works, we solve the problem with the general objective of maximizing the total network utility instead of achieved utility of each Base Station (BS). In the second part of the book, we consider the problem of downlink resource allocation in multi-hop cellular networks where, using the concept of capacity regions, an algorithm for joint optimum rate allocation and routing scheme is proposed to maximize the total throughput of multi-hop cellular CDMA networks. The notion of infeasibility factor is then defined and used to propose an adaptive scheme on top of the above algorithm to manage fundamental coverage-capacity tradeoff for the downlink. | Format: Paperback | Language/Sprache: english | 96 pp.

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